

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDLOA03170

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Mentzelia oligosperma*
COMMON NAME: Sparseseed Stickleaf, Few-Flower Stickleaf
SYNONYMS: none
FAMILY: Loasaceae

AUTHOR, PLACE OF PUBLICATION: Nuttall, Thomas. Botanical Magazine 42:
pl. 1760. 1815.

TYPE LOCALITY: United States

TYPE SPECIMEN: Natural History Museum, BM 645835 (Type). Anon. S.N. No date.

TAXONOMIC UNIQUENESS: The family Loasaceae has about 15 genera and 250 species, mostly in the New World. Arizona has four genera. The genus *Mentzelia* has 26 (Christy 1998) or 27 (NatureServe 2014) species in Arizona (two are found only in the State) plus another nine varieties.

DESCRIPTION: Plant: perennial herb; enlarged rootstock. STEMS several, divergent, to 35 cm long Leaves: 1.5-6 cm long, 0.6-3.2 cm wide; petiole 0.1-1 cm long; blade broadly lanceolate to ovate, with two large teeth near base; uppermost leaves similar to the lower ones INFLORESCENCE: cymose Flowers: subsessile or pedicel 1-2 mm long; calyx usually deciduous; petals orange, 6-8 mm long, 4 mm wide, with trichomes dorsally on upper half and along midline to near base; staminodia 0; stamens all with linear filaments; style 5-7 mm long Fruit: CAPSULES linear or clavate, often irregularly enlarged, reflexing; body 7-12 mm long. SEEDS 1-3(-4), pendulous, not winged, oblong, the hilum end not constricted; testa cells elongate, striate. Christy 1998.

AIDS TO IDENTIFICATION: *Mentzelia* is distinguished from the other four genera found in Arizona from its capsule fruit (rather than an achene) and having 10 to many stamens. Its seeds are in 1-2 rows on each side of 3 placentae (rather than five placentae and numerous seed rows); stinging hairs are absent.

M. oligosperma can be separated from the other 26 species by the following: 1. Seeds and ovules pendulous, parallel to the placentae, appearing as if one row per placenta; capsules more than five times as long as wide, rarely broader; 2. Placentae broad; testa cells markedly elongate; most leaves clearly petiolate, the blades often hastately lobed; annuals and perennials; 3. Perennials; rootstock thickened; main stems usually several, divergent to

scandent; 4. Seeds 1-3 or 4 per capsule, oblong; fruits clavate, most reflexed; petals usually less than 1 cm long, with trichomes on most of the dorsal surface. Christy 1998.

ILLUSTRATIONS:

Photos: [http://swbiodiversity.org/seinet/taxa/index.php?taxon=Mentzelia oligosperma](http://swbiodiversity.org/seinet/taxa/index.php?taxon=Mentzelia_oligosperma).

Photos, line drawing, herbarium mounts: <http://eol.org/pages/486792/media>.

TOTAL RANGE: From South Dakota and Wyoming south through Colorado and New Mexico. Distribution also scattered through Texas with a few collections eastward into Oklahoma, Kansas and Arkansas. Extends into SE Arizona

RANGE WITHIN ARIZONA: Known from three of the Sky Island mountains ranges in SE Arizona: Empire, Whetstone and Dragoon Mountains in Pima and Cochise Counties.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial, multi-stemmed herb with enlarged root stock.

PHENOLOGY: Flowers: Aug-Oct (Christy 1998). All collections in Arizona were made in the first half of September, and both flowers and fruits were collected.

BIOLOGY:

HABITAT: Range-wide: Dry rocky prairies in sand or clay, gypsum and limestone bluffs and ledges (EOL). Rocky slopes, canyons, on limestone (Christy 1998).

ELEVATION: As reported in Christy (1998): 4800 – 5500 feet (1450-1700m). One of the Arizona collections extends this range to 6100 feet (1860m).

EXPOSURE: Not specified.

SUBSTRATE: Found in both sand and clay; gypsum and limestone substrates

PLANT COMMUNITY: Both dry prairies and dry riparian mentioned. Plants associated with two Arizona collections include *Prosopis*, *Fouquieria*, *Calliandra eriophylla*, *Zinnia* and *Dasyllirion* noted at one site, *Pinus*, *Ceanothus*, *Yucca*, *Dasyllirion*, *Choisya*, *Garrya* and *Rhus* recorded at the other.

POPULATION HISTORY AND TRENDS: Unknown for Arizona. There are only three known collections (1976, 1982 and 1983) from three different mountain ranges in SE Arizona. Two of the collections observed that the plant was uncommon or infrequent at the time.

SPECIES PROTECTION AND CONSERVATION**ENDANGERED SPECIES ACT STATUS:** None.**STATE STATUS:** None.**OTHER STATUS:** None.**MANAGEMENT FACTORS:** None specified.**PROTECTIVE MEASURES TAKEN:** None. Two of the collection sites are on national forest lands.**SUGGESTED PROJECTS:** Re-visit the three collection sites in early September to try and ascertain whether the species is still extant. Survey other SE Arizona Sky Island mountains at the known elevation range to see if the known distribution can be expanded.**LAND MANAGEMENT/OWNERSHIP:** Two of the Arizona collections were from Coronado National Forest lands; the other was on BLM / private land.**SOURCES OF FURTHER INFORMATION****REFERENCES:**

Christy, Charlotte M. 1998. Loasaceae: Stickleaf or Blazing-Star Family. Jour Ariz-Nev Acad. Sci. Vol 30: 2. 96-111p.

Encyclopedia of Life (EOL), accessed 12-17-2014, <http://eol.org/pages/486792/details>.

JStor| Global Plants, accessed 12-17-2014,
<http://plants.jstor.org/stable/10.5555/al.ap.specimen.bm000645835>.

NatureServe Explorer, an online encyclopedia of life, accessed 12-18-2014,
<http://explorer.natureserve.org/index.htm>.

Tropicos, accessed 12-17-2014, <http://www.tropicos.org/Name/18900024>.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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ADDITIONAL INFORMATION:

Revised: 2014-12-18 BDT

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